

Title (en)

Tool changing apparatus for machine tools.

Title (de)

Werkzeugwechsellvorrichtungen für Werkzeugmaschinen.

Title (fr)

Perfectionnements aux dispositifs changeur d'outil pour machine-outil.

Publication

EP 0128811 A1 19841219 (FR)

Application

EP 84401113 A 19840530

Priority

FR 8309244 A 19830603

Abstract (en)

1. A tool-changer device for a machine tool (1) of the type comprising a fixed magazine (3) on the side of the machine tool, at a distance from the spindle, in which the tools are displaced with their axis horizontal, a double rotary arm (4) sliding along a vertical axis fixed relatively to the frame of the machine tool (1) and a tool-carrier carriage (5) moving between the magazine (3) and the double arm (4) by sliding along fixed horizontal slides (12, 13) by the action of a first jack (14), the carriage supporting a tool carrier block (19) rocking by the action of a second jack (21) carried by the carriage about a horizontal axis perpendicular to the direction of the tools in the magazine, characterized in that the first jack (14) is connected to the carriage (5) through a spring (16), the block (19) carries a tool-holding sleeve (22) sliding by the action of a third jack (32) along an axis (25) perpendicular to the rocking axis of block (19), said sleeve being capable of swinging with a small amplitude about this sliding axis (25), the displacements of the carriage (5) towards the spindle, the tipping of block (19) towards its vertical position and the sliding of the sleeve (22) downwards when the block (19) is in a vertical position being on the contrary all three restricted by stops.

Abstract (fr)

Changeur d'outil à chariot (5) de transfert entre bras double (4) et magasin (3) dans lequel le chariot (5) coulisse sur des glissières horizontales (axe Y) par vérin (14) avec interposition d'un ressort (16), le chariot (5) porte un bloc (19) basculant sous l'action d'un vérin (21) porté par le chariot (5) autour d'un axe horizontal (direction Y), le bloc (19) portant un manchon porte-outil (22) coulissant dans le bloc (19) perpendiculairement à l'axe Y et susceptible d'oscillations (axe Z) autour de cet axe de coulissement (25), des butées étant prévues pour limiter le déplacement du chariot (5) en direction de la broche, le basculement du bloc (19) vers la verticale, et le coulissement du manchon (22) vers le bas lorsque le bloc (19) est en position verticale.

IPC 1-7

B23Q 3/157

IPC 8 full level

B23Q 3/157 (2006.01)

CPC (source: EP)

B23Q 3/15773 (2013.01)

Citation (search report)

- [X] FR 2391809 A1 19781222 - RATIER SA FOREST [FR]
- [X] US 4274192 A 19810623 - NORIMATSU MICHIO
- [A] EP 0011710 A1 19800611 - KEARNEY & TRECKER CORP [US]
- [A] US 4196506 A 19800408 - REED ROBERT E [US]

Cited by

EP1086781A3; FR2608487A1; FR2564352A1

Designated contracting state (EPC)

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DOCDB simple family (publication)

EP 0128811 A1 19841219; EP 0128811 B1 19860723; AT E20843 T1 19860815; DE 3460342 D1 19860828; FR 2546794 A1 19841207; FR 2546794 B1 19860523

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